AF/1700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Fumikazu MACHINO et al.**

Group Art Unit: **1771**

Serial No.: **09/180,432**

Examiner: **Ula Corinna Rudduck**

Filed: **February 12, 1999**

P.T.O. Confirmation No.: 6770

FOR: **THERMAL-ACOUSTIC INSULATION AND METHOD OF MANUFACTURING SAME**

REPLY BRIEF

Commissioner for Patents
Washington, D.C. 20231

February 4, 2003

Sir:

In response to the Examiner's Answer dated **December 17, 2002**, the following Reply Brief is respectfully submitted.

REMARKS

Applicants here respond to selected portions of the Examiner's Answer dated December 17, 2002.

(3) Status of Claims. The Examiner states that Appellants' statement of the status of claims in the brief is incorrect, indicating that claims 11, 12 and 43 are allowed.

Appellants' statement in the Appeal Brief that claims 1-12 and 15-43 stand rejected was based on point 7 of the Advisory Action dated July 16, 2002. Claims 11, 12 and 43 represent claim group III (see section VIII of the Appeal Brief), and the Examiner's indication of allowability of these claims apparently reflects the Examiner's indication in the telephone interview of July 29, 2002, that the rejections under 35 U.S.C. 112, first and second paragraphs, would be withdrawn. The Examiner indicates in point (6) of the Examiner's answer that these rejections are overcome.

Therefore, apparently only the rejections of claims 1-10 and 15-42 are now at issue in the Appeal, with claims 11, 12 and 43 being allowed. However, as noted below in regard to section (6), no rejection is currently stated with regard to claims 10 and 42.

(6) **Issues**

As discussed above, the Examiner indicates that the rejections under 35 U.S.C. 112, first paragraph (Issue A) and 35 U.S.C. 112, second paragraph (Issue B) are overcome. This apparently leaves only Issue C, which is the rejection of claims 1-9, 11-41 and 43 under 35 U.S.C. 103(a). However, the Examiner has indicated in section (3) that claims 11, 12 and 43 are allowed.

Therefore, Issue C should apparently be considered to now apply only to claims 1-9 and 13-

41. Appellants note that no rejection is currently stated for claims 10 and 42.

(10) Grounds of rejection.

Appellants here address arguments made by the Examiner in the Examiner's Answer. Appellants note that there have been several apparent changes in the Examiner's arguments between the final Office action and the Examiner's Answer, and Appellants here respectfully note apparent errors in the Examiner's revised arguments.

The Examiner restates the rejection of "claims 1-10 and 15-42" under 35 U.S.C. 103(a) over McCullough, Jr. et al. and Otani et al. (page 3 of the Office action). However, as noted above, this rejection in the final Office action of March 28, 2002 (page 3), was applied to claims 1-9, 11-41 and 43. Appellants respectfully note that claims 10 and 42 are not included in this issue.

The Examiner's summary of the grounds of rejection appears to be taken from the final Office action of March 28, 2002, as follows:

The paragraph on page 3 of the Examiner's answer is derived from the first paragraph in point 7 on page 3 of the final Office action, with minor editing. However, in the last line on page 3 of the Examiner's answer the word "will" has been inserted: "McCullough, Jr. et al. will have some degree ...". This somewhat changes the meaning of the sentence, implying inherency rather than teaching.

The second paragraph on page 4 of the Examiner's answer is derived from page 4, lines 11-16, of the final Office action. However, the Examiner has added --and modulus– to the end of this paragraph. This is newly stated motivation, but this is stated without specific reference to a portion

of McCullough, Jr.

The last paragraph on page 4 of the Examiner's answer appears to be a newly worded restatement of page 4, lines 1-8 of the final Office action. In this restatement, the Examiner emphasizes that this is rejection is based on inherency. On page 4, lines 11-15, the Examiner states:

> "... it is reasonable to presume that these properties are **inherent** to **McCullough, Jr.'s** invention. Support for said presumption is found in the **use of like materials, i.e., anisotropic pitch type carbonized fibers** having the same fiber diameter bonded by a thermosetting resin and the use of like processes, i.e., carbonizing at a temperature between 550 to 800 °C. The burden is upon Appellant to prove otherwise. *In re Fitzgerald* 205 USPQ 594." (emphasis added)

This statement by the Examiner appears to be in response to Appellants' arguments on page 15 of the Appeal Brief.

Appellants respectfully assert that the statement by the Examiner on page 4, lines 11-15, appears to be contradictory. The Examiner has admitted that McCullough, Jr. et al. does **not** teach the use of anisotropic pitch-based carbon fibers, with anisotropic pitch-based fibers being only taught by Otani et al. Yet here the Examiner states that the properties would have been inherent in **McCullough, Jr.**

The Examiner may have meant to state that the claimed properties would be inherent upon the combination of McCullough, Jr. et al. and Otani et al. However, Appellants do not believe that this is correct. Appellants note that MPEP 2112 states, in part:

> "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981).

> "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) ..."

Note that "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the **teachings** of the applied prior art" (emphasis added). Appellants have already argued that McCullough, Jr. and Otani, taken together or separately, **fail to teach** several of the limitations of the claims, in particular, the 2 μm fiber diameter in claim groups I and II and the bulk density limitation in claim group II. Since these **are not taught** by either reference, properties resulting from adding this limitation cannot possibly **necessarily** flow from the teachings of the prior art.

(11) Response to Arguments.

Appellants here respectfully note apparent errors in the Examiner's arguments made in the Response to Arguments section.

In the first paragraph on page 5 of the Examiner's Answer, the Examiner states that: "This argument is not persuasive because "less than 2 μm" and a fiber diameter of 2 μm as disclosed by McCullough, Jr. et al. at column 4, line 20-28, are **mathematically equivalent**" (emphasis added). Appellants respectfully disagree. It is Appellants' contention that "less than 2 μm" and "2 μm" are **not** mathematically equivalent. Appellants maintain their previous arguments that there is no teaching or suggestion in McCullough, Jr. et al. for the range recited in present claims.

In the second paragraph on page 5, the Examiner states with regard to whether Otani et al. teaches a carbon fiber with average diameter less than 2 μm: "This argument is not persuasive because Otani et al. was not used for its teaching of fiber diameter, but for its disclosure of anisotropic pitch type carbonized fibers." Appellants here conclude that the Examiner is admitting that Otani et al. does not teach an average diameter of less than 2 μm, agreeing with Appellants' position.

In the third paragraph of page 5, the Examiner argues, with regard to Appellants' arguments concerning increased strength as a motivation for the combination of Otani et al. and McCullough, Jr. et al., that:

> "This argument is not persuasive because a primary reference does not have to indicate its flaw before it is modified; there is no requirement that a reference **teach** how it can be improved before a prima facie case of obviousness can be established with a combination of another reference." (emphasis added).

In this regard, Appellants note that MPEP 2143.01 states:

> "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art."

Appellants' argument was that there is no **teaching, suggestion or motivation** for the proposed combination, in particular for the motivation of increased strength proposed by the Examiner. Appellants' argument went beyond merely stating that the references did not "teach" this, and the Examiner has not responded to this argument.

The Examiner then states that:

> "Furthermore, Otani et al. disclose that anisotropic carbon **fibers** have superior mechanical properties ... such as strength and modulus. Therefore, a substitution would result in a **panel** with increased strength." (emphasis added)

However, Appellants respectfully argue that this statement **does not provide a proper motivation** for the combination, only a hindsight analysis of what might result from the combination. It is a considerable step in reasoning to infer how properties of individual fibers will affect properties of a panel of particular construction made from the fibers.

In the last paragraph on page 5, the Examiner argues against Appellants' arguments regarding the bulk density in McCullough, Jr. et al. The Examiner states that:

> "This argument is not persuasive because claim 10 recites a bulk density of 3 kg/m^3 to 10 kg/m^3 and McCullough's bulk density ranges from 6.4 to 97 kg/m^3. Therefore the limitation has been met."

Appellants had admitted at the top of page 14 of the Appeal Brief that there was overlap between this claimed density limitation, recited in claim 1, and this teaching in McCullough. However, Appellants' arguments in the second paragraph of page 14 were specifically directed to claim 10 (with relevance to claim group II), although that claim was not under rejection, and to claim 11 (with relevance to claim group III), which has now been indicated as allowed. Specifically, claim 10 has the limitation on the relative amount of thermosetting resin in relation to the amount of carbon fiber aggregate (parameter b), which is related to the bulk density of the aggregate, which Appellants argued is not taught or suggested by the prior art. The Examiner has not commented on this

argument. However, these are now moot points, since the rejection is not applied to claim 10 and claim 11 has been indicated as allowed.

Finally, in the paragraph of the Examiner's answer on page 6, the Examiner rebuts Appellants' assertion that the combination of the references do not suggest the claimed subject matter. However, this rebuttal does not appear to address Appellants' arguments from pages 9-15 of the Appeal Brief, in particular in section (2) on pages 14-15. Rather, the Examiner only appears to state "This argument is not persuasive because, as shown above, the combination of McCullough, Jr. et al. and Otani et al. result in the present invention."

In response, Appellants have clearly argued that McCullough, Jr. et al. and Otani et al. do **not** provide all of the limitations of the present claims, and no combination of these references can result in the present invention. Moreover, Appellants have presented several arguments that there is on suggestion or motivation in the references for those claim limitations not taught by the reference, and that the Examiner's proposed combination of the references appears to be based solely on hindsight.

To summarize Appellants main points, neither McCullough, Jr. et al. not Otani et al. teaches or suggests the recited limitation of carbon fibers having an average fiber diameter of less than 2 μm. Moreover, there is no suggestion or motivation in the references for combining McCullough, Jr. et al. and Otani et al. to produce the recitation of the present claims. Appellants note that the advantages disclosed in the present application associated with a material made from carbon fibers having a diameter of less than 2 μm (particular acoustic and thermal insulation properties, compression recovery rate, tensile strength and durability) are clearly not disclosed in McCullough,

Jr. et al. and Otani et al.; as such, McCullough, Jr. et al. and Otani et al. cannot be considered to teach these advantages as a motivation for the combination of the references. Reference to these properties as motivation for a combination would therefore be hindsight reasoning.

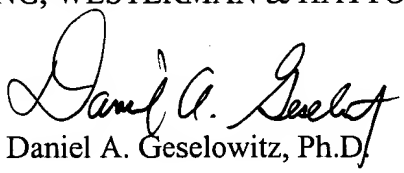
Appellants therefore maintain their arguments presented in the Appeal Brief.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



Daniel A. Geselowitz, Ph.D.
Agent for Applicant
Reg. No. 42,573

DAG/plb
Atty. Docket No. **981361**
Suite 1000, 1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930

23850
PATENT TRADEMARK OFFICE

H:\FLOATERS\DAG\98\981361\reply brief 2-4-03